

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1–6. (Canceled)

7. (New) A fuel cell, comprising:

an electrolytic membrane layer provided with a front face and a rear face;

a first metallic current collector layer having a plurality of transverse passages,

the first current collector layer arranged on and in direct contact with the front face of the electrolytic membrane;

a first electrode layer comprising a catalytic element deposited over the first current collector layer and the front face of the electrolytic membrane, wherein the first electrode layer:

fills in the transverse passages of the first current collector layer and is in direct contact with the electrolytic membrane through the transverse passages, and

covers the first current collector layer so that the first current collector layer is between the front face of the electrolytic membrane and the first electrode layer;

a second metallic current collector layer having a plurality of transverse passages; the second current collector layer arranged on and in direct contact with the rear face of the electrolytic membrane; and

a second electrode layer comprising a catalytic element deposited over the second current collector layer and the rear face of the electrolytic membrane, wherein the second electrode layer:

fills in the transverse passages of the second current collector layer and is in direct contact with the electrolytic membrane through the transverse passages, and

covers the second current collector layer so that the second current collector layer is between the rear face of the electrolytic membrane and the second electrode layer.

8. (New) The fuel cell according to claim 7, wherein the first and second current collectors are both structured in the form of a grid.

9. (New) The fuel cell according to claim 7, wherein the first and second current collectors are both structured in the form of a comb.

10. (New) The fuel cell according to claim 7, wherein the first and second current collectors are porous, the transverse passages being formed by the pores of the current collectors.

11. (New) The fuel cell according to claim 7, wherein the first and second current collectors each comprises an alternation of porous zones and non-porous zones, the transverse passages being formed by the pores of the porous zones.

12. (New) The fuel cell according to claim 7, wherein the metal of the first and second current collectors is chosen from noble metals.